

PATENT

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**ABSTRACT OF THE DISCLOSURE**

An apparatus and method for securing and electrically contacting a substrate on a non-production surface of the substrate. The apparatus includes a substrate holder assembly having a substrate engaging surface formed thereon, the substrate engaging surface being configured to engage a substrate on the non-production surface. The apparatus further includes an electrical contact device positioned on the substrate engaging surface, the electrical contact device including a plurality of radially spaced electrically conductive members configured to electrically communicate with the non-production surface of the substrate positioned on the substrate engaging surface. The method includes depositing a conductive seed layer on a production surface of the substrate, and depositing a backside conductive layer on a portion of the non-production side of the substrate, the backside conductive layer extending around a bevel of the substrate to electrically communicate with the seed layer. The method further includes securing the substrate in a chuck configured to engage the non-production surface of the substrate, contacting the backside conductive layer with an electrical cathode contact on the non-production side of the substrate, and plating over the conductive seed layer via application of an electrolyte to the production surface of the substrate and applying an electrical bias to the electrical cathode contact and an anode in communication with the electrolyte.

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